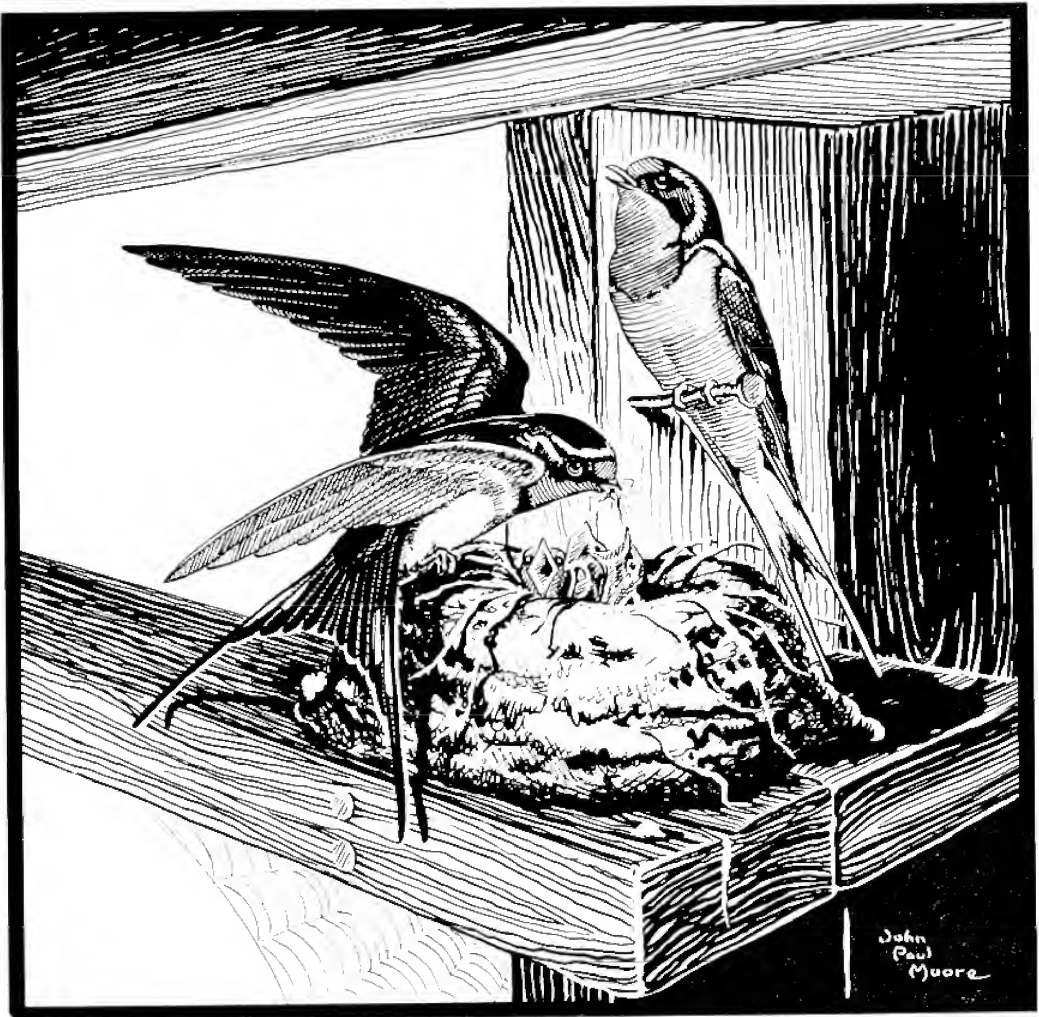


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POPULATION CHANGES IN THE RED-SHOULDERED AND RED-TAILED HAWKS.

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There has been a persistent decline in the number of Red-shouldered Hawks (*Buteo lineatus*) observed in Polk County in the past few years, with an increase in the number of Red-tailed Hawks (*Buteo jamaicensis*) seen. This was not a local phenomenon as Fred W. Kent reported a similar situation in the Iowa City area. It seemed advisable to learn the conditions elsewhere, and, if possible, to find the reasons for such changes as have occurred.

Bent (1937) says the Red-shouldered and Red-tailed are competitive species, each intolerant of the other, antagonistic, and occupying entirely separate ranges. He thought the Red-shouldered the commonest hawk in the east and south portions of the United States and Canada in woodlands scattered through open country, but less common than the Red-tailed in the open country of the Middle West. He tells of the Red-tailed invading some hardwood tracts in which the Red-shouldered had nested for years, driving out the latter and even appropriating several of their old nests. In contradiction of this tendency he quotes William Brewster regarding several localities in Maine where the Red-shouldered replaced the Red-tailed. According to Austing (1964) both species will nest in a fringe area, but not in close proximity, and in such areas the Red-tailed may vacate after a year or two to be replaced by Red-shouldered. It is not unknown for the two to switch back and forth every few years. The Red-tailed in such areas are probably two or three years old, and making a first or second attempt at nesting. Here in Iowa the consensus is that the Red-shouldered is found nesting in wooded areas along creeks and streams, with the Red-tailed in the drier woodlands and seen more often in open country.

The breeding range of the Red-tailed extends considerably farther north and south than that of the Red-shouldered. Both are migratory in the northern part of their ranges, but Coues (1896) called the Red-shouldered the "Red-shouldered Buzzard" or "Winter Hawk" and referred to it as one of the commonest hawks in the United States, especially in winter. Austing states the first-year Red-tailed are strongly migratory, but that some northern adults migrate also.

These buteos are two of the most frequently seen raptors in Iowa. Anderson (1907) called the Red-tailed a common summer resident, breeding in all parts of the state, generally resident all year in the south half, and common in all sections by latter February or the first of March. The Red-shouldered was called a tolerably common summer resident in the south, especially in the southeast. According to Bailey (1918), the distribution of the Red-tailed in Iowa was mainly in the east-central, southeast and southwest sections, and along the Missouri River. It was thought far more abundant in spring, summer and autumn than in winter. The Red-shouldered, while fairly common in parts of the state, was said to be not conspicuous as it frequents heavier timber and wooded bottom lands along streams. Bailey's distributional map shows only a few Red-shouldered records, these being in the east and east-central sections. DuMont (1933) thought the Red-shouldered a fairly common summer resident in the south half of the state, uncommon or rare in the northern part, with a few permanent residents, while the Red-tailed was a fairly common breeding bird, most numerous in the east and southeast, and less common in the northwest. Grant (1963) classified the Red-

tailed as abundant, and the Red-shouldered as common, both being called permanent residents.

According to Bent, the diets of the two species are similar, rodents being a large factor. Bailey says the Red-shouldered has a more varied diet, including frogs, reptiles, crayfish, and fish, in addition to the mammals and birds common to both. The fondness of the Red-shouldered for streamside habitats would account for the difference. Austing concludes small mammals are greatly preferred by the Red-tailed, although it can shift to larger with a scarcity of mice.

Since most of the numerical data concerning the two species in Iowa are in the Christmas census reports in **Iowa Bird Life**, these reports for the years 1946 to 1963 were examined. With but five exceptions, all of the reports which included either species were from the central and east-central sections, but this may be more a reflection of our membership distribution than a picture of the hawk population.

The numbers of Red-tailed per party reported for all stations for each year of the 18-year period were figured and show a steady increasing trend from .90 in 1946, to 3.66 in 1963. The corresponding figures for the Red-shouldered are .43 and .38 per party. The ratios for Red-shouldered to Red-tailed per party show a steady reduction from 48% to 10%, with the trend interrupted only in 1950 when the Red-tailed hit an 18-year low. One important variable in the censuses is the increased number of observers; Davenport beginning in 1955 greatly increased the scope of their count, and have accounted for 40% to 50% of all Red-shouldered seen, and a somewhat smaller percentage of Red-tailed. Aledo started in 1960 to contribute substantial numbers of both species. If Davenport and Aledo are excluded from the above calculations, the numbers of Red-tailed per party run from .93 in 1946 to 3.70 in 1963, and the numbers of Red-shouldered range from .41 to .26. However, the ratio of Red-shouldered to Red-tailed drops from 44% in 1946 to 7% in 1963. The Des Moines Christmas censuses show the Red-tailed count per party to be fairly level from 1946 to 1951, with peaks in 1952 and 1955, then a low in 1956 with an upward trend thereafter which follows the state-wide pattern. The figures for the Red-shouldered show an uninterrupted downward trend beginning in 1956. The composite record for the state shows a less pronounced decline.

The weaknesses of the Christmas counts as a means of determining populations are well known; Stewart (1954) enumerates some of these, and suggests that quantitative data be used only to show general trends. While the defects of the counts make it difficult to follow the population changes of a species, if it may be assumed that counts of both hawks are equally affected by variable in the censuses, then a comparison of the numbers seen would be an indication of their relative yearly abundance **in winter**.

Unfortunately, figures for summer residents (and migrants) corresponding to the foregoing are lacking. The Des Moines Audubon Society has taken spring and fall censuses for some years, usually on the first week-end in May and October. Over a 19-year period there has been a significant increase in the number of Red-tails found, both in spring and fall, with a decline in the number of Red-shouldered in both, the fall decline being the larger.

An effort was made to compare the Iowa population changes with those of our neighboring states, Minnesota and Illinois. The Red-tailed was said by Roberts (1936) to be a summer resident, breeding throughout the state and occasional in winter. The Red-shouldered was an uncommon summer resident, breeding sparingly in the southern part of the state. Dr. P. B. Hofslund (pers. comm.) said so few Red-shouldered were noticed at Duluth that no estimate of population changes could be made.

Considerable work on bird populations has been done in Illinois. Graber and Golden (1960) made a study of population trends of raptors as shown by Christmas counts, and Graber and Graber (1963) made a comparative study of population changes of all species during a 50-year period.

Graber and Golden analyzed 277 counts from 1903 to 1955, using those which recorded at least one raptor, in which no more than 10 persons took part, and no census party consisted of more than four persons. The Red-tailed has shown a decrease over the entire period, but in the central zone there has been an upward trend since a low density was recorded in 1937. The Red-shouldered showed an increase from 1903 to 1955 in the southern zone but a downward trend is apparent since a 1948 high. In the central zone there was little change over the whole period, but a sharp decrease since a 1949 peak. The central zone had the highest frequency for the Red-tailed and the southern zone for the Red-shouldered. No explanation is offered for this but it is mentioned that the northern and central zones have relatively uniform terrain and are 90% cultivated. Southern Illinois is the part with the most land in forest.

The Graber and Graber study was made by strip-censusing the state in June and July of 1957 and 1958, during the winter of 1956-1957, and also in February, 1958. Here again the state was divided into the three zones. For this study there was available for comparison the quantitative record of bird populations prepared by A. O. Gross and Howard A. Ray from their state-wide cross-country censuses of 1906-1909. As the strip-census is admittedly not well suited for censusing hawks, Graber and Graber considered the results useful primarily for comparisons. It was concluded that winter populations of the Red-tailed tended to be lower than summer populations in the north and central zones, but higher than summer populations in the southern zone. This followed the general seasonal shift. The census data showed the winter population of the Red-tailed in 1906-1907 was much higher than that in 1956-1957, or in the following year. The Graber and Golden analysis showed the 1906-1907 population in central Illinois was above average. Red-shouldered were found in all of the censuses only in the southern zone.

Austing (pers. comm.) reports a shift in the Ohio hawk populations similar to that in Iowa.

Various members of the Iowa Ornithologists' Union were asked their opinions regarding the hawk populations, but the amount of data received was not nearly as great as was hoped. Summaries of the comments follow.

Northwest

C. S. Fitzsimmons, Sibley has recorded the Red-tailed almost every year in March or April, and September and October, with one 15 August date. The Red-shouldered has never been positively identified.

Northeast

Don Peterson, Decorah, has seen the Red-shouldered around Bluffton and in the Upper Iowa River Valley, and thinks that due to the remoteness and extensive wooded valleys of northeast Iowa the Red-shouldered may be more numerous than is thought. He is of the opinion that there are relatively large populations of both species in Winneshiek County.

Lawrence J. Lindeman, McGregor, has seen only one Red-shouldered to at least six Red-tailed in the spring of 1964.

West-central

Mrs. Darrell M. Hanna, Sioux City, reports no Red-shouldered are seen in that area, although there are quite a few Red-tailed.

Central

Mrs. Harold B. Brown, Grundy Center, has seen many Red-tailed but only two Red-shouldered in the first half of 1964. It is felt the number of Red-shouldered is about the same as in other years.

Dean Roosa calls the Red-shouldered scarce around Goldfield with only one nest found. None was seen in the 1964 spring migration or during the summer. The ratio of Red-tailed to Red-shouldered is about 22 to 1 in the Goldfield area, and 12 to 1 around Lehigh. He has not enough records to establish any population trends.

Mrs. Gladys Black, Pleasantville, has not seen a Red-shouldered in eight years. There have been two pairs of Red-tailed there each year since 1956, but no young were observed since 1962.

Don Peterson, early in 1964, saw four Red-shouldered and 11 Red-tailed close to the Des Moines River valley near Ledges State Park. He thinks the lack of deeply wooded valleys in the state has affected the Red-shouldered population. His observations lead him to believe that in a suitable area several pairs of Red-shouldered can be found, but where there is no such area none will nest.

Jim Keenan, Ogden, has seen the Red-shouldered mostly during the summer months, but never in numbers. The Red-tailed is a common resident, abundant 20 years ago and then declining, but a noticeable increase has occurred in the last two years. One or two may be seen every trip in a heavy stand of timber along a creek, and nesting is suspected. It is least abundant in the winter which may be taken as evidence of migratory movement.

Russell M. Hays, Waterloo, furnished a very detailed record of observations by years and by seasons, further broken down among 15 locations. This record shows the Red-tailed observations to have increased in the past eight years, principally in the fall, with a large number seen in 1963. A number of observers interviewed by him were agreed that in that area there was some increase in Red-tailed numbers compared with earlier years. An unusual number of Red-shouldered were also seen in 1963, but there was no trend discernible for the earlier years. Numbers seen at Wyth Park and Black Hawk Creek have remained the same for some years, but they have been missing the past two years in some other areas.

The writer's record of Iowa observations, which are largely in Polk County, for the past nine years show an upward trend for the number of Red-tailed seen, but the observations of Red-shouldered decreased steadily. While at least one was seen on 16% of the trips in 1955, and 22% in 1956, they were seen on only 5% of the 1962 trips and 3% in 1963. The Red-tailed was seen most often from November to March, with very few in the summer months. The Red-shouldered was observed for the most part from September to June, but the percentage for November was unaccountably low.

East-central

Fred W. Kent, Iowa City, has a record of Red-shouldered and Red-tailed observations by weeks since 1950. The Red-tailed has shown no significant change, but the number of weeks in which the Red-shouldered was seen in 1962 and 1963 is only half the corresponding number in 1950 and 1951.

Esther Copp, Wheatland, has observed both Red-tailed and Red-shouldered each year, and feels there has probably been no change in their numbers. There are more Red-tailed than Red-shouldered seen soaring over the cultivated fields away from the woods. The Red-shouldered has been seen in January year after year.

Myra Willis, Cedar Rapids, has no summer records for the Red-shouldered, and in the other seasons it is always outnumbered by the Red-tailed.

Lillian Serbousek, Cedar Rapids, comments that Red-shouldered have been very scarce with only one record in 1964, whereas there have been three or four pairs of Red-tailed apparently nesting. During migration as many as a dozen Red-tailed have been seen in a day's trip with no Red-shouldered seen.

Dr. Robert F. Vane, Cedar Rapids, considers the Red-shouldered an uncommon permanent resident according to Trautman's classification. There were formerly four or five places, always along waterways, where Red-shouldered could be found, but now they are present in but one of these. The Red-tailed is considered as common as ever.

Peter C. Petersen, Jr., Davenport, says Red-shouldered are resident on Credit Island, and in the early 50's could be found without difficulty, especially in winter, but now are seen on only about half of the trips. There is no evidence of migratory movement. Along the Mississippi from Dubuque to Burlington there is probably at least one pair to each 10 miles of river edge with at least double that density at the Savanna Ordnance Depot and Lake Odessa-New Boston area. It is estimated the population has dropped, possibly 50%, in the last 10 years. The Wapsipinicon has a similar and possibly greater population in its lower reaches. It is interesting to learn that a Red-tailed nestling banded near McCausland in May, 1958, was recovered at Duluth in October, 1959.

George E. Crossley, Farley, writes that summer Red-shouldered seem to be less in evidence, while Red-tailed have increased considerably. Red-shouldered have been seen in winter in the same locations, usually near the Mississippi River, for the past four or five years, whereas from 1943 to 1959 they were seldom seen before March. The Red-tailed is seen both along the river and in open country. Most of the territory he covers is open country and the numbers seen per year have been two or three Red-shouldered against about 100 Red-tailed. The Red-shouldered population along the river may be different from the rest of the state. This is in line with Petersen's comments above.

Terrence N. Ingram, Apple River, Illinois, spends considerable time trapping and observing hawks along the Mississippi from Sabula to Guttenberg. He finds concentrations of Red-shouldered greatest near Bald Eagle concentrations in winter. He recorded concentrations of six to eight in a twenty minute period two years ago near Bellevue, but last winter the peak was seven in one hour near Guttenberg. The wintering population of Red-tailed north of Dubuque across the river from Iowa is one bird per square mile. He feels the Dubuque area is a migration path. He has no summer records of the Red-shouldered. His studies in the above mentioned area of S.W. Wisconsin show 20% of the young fledged and 70% of the adults disappearing from the nesting area. He is now devoting his full time to research into buteos and eagles in this area, using tag markers (with recoveries to date from Mississippi and Tennessee), and he plans to use radio transmitters to track birds.

Southwest

Mrs. Robert I. Bordner, Shenandoah, calls the Red-tailed common with large numbers seen during migration. The Red-shouldered is considered rare, with none seen since April, 1962. Mrs. W. C. DeLong is quoted by Donald Gillaspay as having seen but one Red-shouldered in that area.

South-central

Donald Gillaspay, Lamoni, saw his only Red-shouldered in March, 1960, but does most of his birding in open country. He sees many Red-tailed during the last two weeks of March and first week in April, with two or three in any five-mile drive. He is of the opinion that a search of the Grand River bottoms 10 miles to the east might produce Red-shouldered.

Summary

It is generally agreed that the Red-shouldered is scarce in Iowa compared with the Red-tailed, and is practically unknown in the western part of the state. The results of this study would have been more satisfactory had there been more contributors and more complete records of observations. Aside from three areas, Iowa City, Waterloo and Des Moines, there are no figures (other than Christmas census reports) available to show the extent of population changes. However there is little disagreement among those who expressed any opinion regarding the trend of the Red-shouldered population. Also there is no intimation that the Red-tailed population has decreased, in recent years, at least.

Christmas census reports show the number of winter Red-tailed counted has increased appreciably while the number of Red-shouldered seen is down. No satisfactory explanation of the Red-shouldered decrease has been presented, nor is it clear whether the Red-tailed are merely increasing in their old territories with the contrary true of the Red-shouldered, or if the latter are being replaced by the former. Continued clearing of timber lands would naturally be expected to cause a decrease in the hawk populations, but if, as those contributing to the study say, the Red-shouldered is found along streams and wet locations, their habitats would appear less subject to disturbance than the drier upland nesting areas of the Red-tailed. Also, if the food supply of the raptors is decreased by efforts to rid farm areas of rats, mice, and other rodents by hydrocarbon sprays or other means, the Red-tailed would seem the more susceptible to poisoning. On the other hand, Dr. Vane points out that with the Red-shouldered frequenting stream-side areas they could be disturbed by the increased recreational activities in such places.

Finding an answer to this question would seem to depend upon a state-wide study of nesting sites and nesting successes and failures, and the members are urged to cooperate in such a survey. Also the keeping of records of Red-shouldered observations from now on, and recording changes in habitats will be of great help in a later study.



Red-tailed Hawk



Red-shouldered Hawk

Photos by F. W. Kent

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NESTING OF RAPTORES IN WESTERN WRIGHT COUNTY

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INTRODUCTION

The Eastern Red-tailed Hawk (*Buteo jamaicensis*) is considered to be the most common hawk nesting in Iowa, often nesting as a supplementary species to the Great Horned Owl (*Bubo virginianus*). In the spring of 1964, a study was undertaken to determine the density of nesting raptores in the western part of Wright County. The main study consisted of the Boone River with tributary creeks.

PROCEDURE

In the early stages of the study, the area thought to contain nests was walked through. Later, after finding a number of nests, it became possible to recognize suitable habitat from roads, thus eliminating much unnecessary walking. Entrance into nesting area of Red-tailed or Swainson's Hawks (*Buteo Swainsonii*) caused them to soar overhead and scream, thus aiding in locating nests. Great Horned Owls, however, slipped silently from the nest and remained hidden. Nests, when located, were marked on a township map. Steel pole climbers were used to visit the nest and band the young.

RESULTS

Red-tailed Hawk

Nests. A total of fifteen nests were found, from which eighteen young, or 1.20 birds per nest, fledged. Five eggs, or 21.6 per cent, of the total found proved to be sterile. One nest contained two such eggs. The average height

of the nests was 39 ft., with extremes of 25 and 61 ft. These hawks, as mentioned by Austing show no preference as to species of tree for nesting. In this area, Green Ash (*Fraxinus pennsylvanica*) contained five nests, American Elm (*Ulmus americana*) four, Soft Maple (*Acer saccharum*) three, Hackberry (*Celtis occidentalis*) two, and White Oak (*Quercus alba*) one. The typical nest measured 24 to 30 inches in outside diameter, with the inner cavity from 12 to 25 inches across. Most were rather flat and shallow, but one, a new nest in a deep crotch, was over two feet in height. The nests proved to be very sturdy, as winds up to a velocity of 80 miles per hour were experienced and none were dislodged. It was interesting to note the relationship of the nest site to a stream. All nests were within 350 ft. of a stream, most within 20 yds., and two were directly over water.

The nests were invariably lined; usually with inner bark and corn husks. Only one, well away from corn fields, failed to contain husks. Each time a nest was visited, a fresh green sprig was found in the nest. This was usually from a tree of the genus *Populus*, probably because they are more easily broken than others.

Eggs. All the eggs that were observed appeared a dirty white, some of which were sparsely blotched with small dark spots. Bent states the measurements of 59 eggs averaged 59x47 mm. Of the four eggs measured with a vernier caliper, the results were as follows: 62.0 x 48.1 mm., 56.4 x 44.9 mm., 54.6 x 43.7 mm., and 48.1 x 40.9 mm. The latter, smaller than any mentioned by Bent, was possibly the first laid by a young bird.

Food. Because of its food habits, the Red-tail is correctly considered a beneficial bird. In this study no beneficial bird or animal remains were found in the nest. While the young hawks were still downy, the principal food was mice and voles. As they grew, their diet was changed to larger animals: Thirteen-lined Ground Squirrel (*Clitellus tridecemlineatus*), found in several nests, Eastern Cottontail (*Sylvilagus floridanus*), found in most nests, and Eastern Fox Squirrel (*Sciurus niger*), found in one nest.

Territory. The territory of the Red-tail was found by Fitch to be 1,300,000 square meters. Findings in this study do not violate this, as the closest nests were nine-tenths mile apart. Bent considered the Great Horned Owl and the Red-tail as supplementary species, one using the area by day, the other by night. Each owl nest was found bordering or within the range of the Red-tail's territory. One Red-tail nest was found within 400 ft. of an owl nest.

Fledging time. The earliest date of a Red-tail leaving the nest was May 14th; the latest date was June 15th, with the bulk leaving the latter part of May. In all except two cases both adults were present at fledging time. This varies sharply with results obtained by Ingram in Wisconsin, where it was unusual to find both parents present at fledging time.

Swainson's Hawk

It was a pleasant surprise to find three nests of the attractive Swainson's Hawk in the study area. One nest was apparently destroyed by high winds before completion. The other two nests each contained three eggs and successfully fledged three young, for an average of three birds per nest.

This was the writer's first record of the Swainson's Hawk nesting in Wright County. Other records of this hawk nesting in Iowa are furnished by Carter for Humboldt County, Carter for Cass and Pottawattamie Counties, Youngworth in Plymouth County, and Blevins and Ehlers fida Petersen in Scott Co.

Nests. The Swainson's nests appeared much like the Red-tail nests; both were within 20 ft. of a river. One nest, in a Soft Maple was 46 ft. above the ground; the other, in an American Elm, was 60 ft. up. One nest, late in the nesting season was found to have had its area increased by the adult hawks

adding material to one side, probably to accommodate the growing hawks. This nest, as did one Red-tail nest, had the nest of the House Sparrow (*Passer domesticus*) built in the side. Van Tyne and Berger list this as "protective" nesting, but fail to mention the House Sparrow as one of the species.

Eggs. The eggs appeared to be a beautiful pale greenish-white and all were immaculate. None were measured.

Food. Both nests contained the remains of Cottontail Rabbits; one contained the feathers of the Western Meadowlark (*Sturnella neglecta*).

Fledging. One nest of hawks fledged during the second week of July; the other during the third week.

Great Horned Owl

A total of seven Great Horned Owl nests were found. These nests fledged ten young birds, for an average of 1.43 birds per nest.

Nests. Three nests were found in the cavity formed by a dead or broken limb. These each contained two young. Four nests were found to be old hawk nests; each contained one bird. Possibly the open hawk nests allowed the older or larger owl to force a smaller one from the nest. The nests were not found early enough to check for the number of eggs. The cavities all were approximately 20 ft. above the ground, the other nests were from 38 to 62 ft. high. Some nests were not located in time to allow examination or banding, as it was feared the young would attempt to leave the nest prematurely.

Food. Of the nests examined, all contained the remains of Cottontail Rabbits. Two contained parts of hen Pheasants (*Phasianus colchicus*), two contained feathers of the Common Grackle (*Quiscalus versicolor*), and three contained remains of Yellow-shafted Flickers (*Colaptes auratus*).

Fledging. The average date of fledging was April 27th, with the last leaving on May 2nd.

SUMMARY

In the spring of 1964, western Wright County, Iowa, was studied to determine the breeding density of large raptores. A total of 24 nests of Red-tailed Hawks, Swainson's Hawks, and Great Horned Owls were located. The Red-tailed Hawk proved to be the predominant nester, with 15 nests located. Great Horned Owls leave the nest first, about May 1st, Red-tails leave next, the latter part of May, and Swainson's fledge in July. Red-tails, as judged by remains found in nests, are completely beneficial birds.

The first records of Swainson's Hawks nesting in Wright County were obtained. All Buteo nests were found in close proximity to a stream. While the large raptores had a fairly good nesting season in the study area, over one-fifth of the eggs found were sterile.

AN EXPEDITION FOR IOWA NESTING BIRDS IN AUGUST

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MOUNT VERNON, IOWA

I once heard George Miksch Sutton say that the most exciting time of the "bird year" was fall. However, most Iowa bird students would not select August for nesting studies. This is not to reckon with careful observers like Mr. Eldon J. Bryant of Akron, Iowa.

A letter from him received August 1, 1964, reported factually on nesting Blue Grosbeaks and sight records of other equally unusual species. This information, and an invitation to "see for yourself", was received about noon. A few moments later Mr. Fred Kent of Iowa City agreed by phone to "be ready in less than an hour." Few expeditions ever got off to a more hurried start with "gulped" sandwiches and postponed household responsibilities. It was a minor matter that we left air-conditioned homes for 370 miles of 95 degree highways. Physical discomfort and shirked home duties were all forgotten with traveling companions like Fred Kent. The common roadside birds were our usual "conversation pieces", with an occasional speculation on what alternate highway might have less traffic.

Toward the end of the day we suddenly realized that the Bryant family had no positive knowledge of the expedition descending on them. The letter had thoughtfully suggested "a few hours notice" and they would be ready for us. It was singularly appropriate, then, that we phoned news of our approach from Audubon, Iowa. A restful night was spent in a western Iowa motel, and at 8 o'clock the next morning, August 2nd, we were at the Bryant farm.

Mr. Bryant took us immediately to nearby Broken Kettle Creek. The dry creek bed was weed-filled at this time of year. He pointed out to us a clump of ragweed in the very bottom of the ditch (see top photo). In one stalk about 5½ feet tall a nest could be seen about 2½ feet above the ground containing a female Blue Grosbeak. Not caring to risk an abandoned nest, we approached no closer than about 30 feet. However, the nesting bird could be readily identified by binocular. Earlier when Mr. Bryant found the nest, he noted that this one was slightly larger than usual and "the only one I have ever seen lined with thistle down."

We next were conducted to a nearby field where the fence-rows held much of interest. We paused only to note two agitated Eastern Kingbirds near an active nest. A nearby boxelder held an Orchard Oriole nest that earlier had been abandoned. It was about 15 feet off the ground, a handsome, basket-like nest suspended in small fork-like branches. Later in the morning we were to see the black-throated immature male Orchard Oriole.

A few feet away a Morning Dove had taken squatter rights on a Robin's nest. Undoubtedly it was a safer nest for her eggs than any nest she could construct herself. She flushed from the nest as we walked near the limb, and dropped to the ground for a serious demonstration of the broken-wing act. This was the first time that I had ever seen a Mourning Dove stage this ruse. Bent mentions that this is not an unusual procedure for a Mourning Dove, and also that they sometimes convert Robins' nests for their own use.

We moved on to the south side of the field where the fence-row had even greater interest (see lower photo for nature of the Blue Grosbeak nesting habitat). The taller trees, other than the large cottonwood, were boxelder, closely pressed by a dogwood-plum thicket. Here we had a view of another female Blue Grosbeak, this one in flight. When at rest the heavy beak was noted, and the almost "golden" or "bronze" appearance of the back of the neck and side of the head. Mr. Bryant referred to it as an "almost reddish sheen." Peterson's **Field Guide** does not mention this characteristic and his colored illustration indicate a dull brown. Roger Tory Peterson may have painted his female Blue Grosbeak from an old study skin, but the live bird in a good light shows a "live" color unlike his representation. A second female grosbeak was noted a few minutes later, now totaling three females observed for the morning. We never did get a good view of a male, but we did hear its song. This, to us, was further evidence that we were trying to observe a shy species.



Blue Grosbeak Nest Location
Blue Grosbeak Nest
Blue Grosbeak Nesting Habitat
Photos by F. W. Kent

Of equal interest were two abandoned grosbeak nests which Mr. Bryant had found. One had been built only two or three days earlier (see middle photo). Both nests were nearly identical in construction and lined with small brown rootlets. Both were about 4 feet off the ground, one in a young plum tree and the other in a red osier dogwood. Of special interest to me was the fact that both nests contained a few narrow "ribbons" of fieldcorn leaves woven through the nest. Davie, Burleigh, and other writers mention that the Blue Grosbeak sometimes makes use of cast-off snake skins in nest construction. Possibly the strips of corn leaves were a substitution. The older nest contained an egg shell fragment, light blue with a few dark spots and irregular streaks.

Returning toward the road we noted a Grasshopper Sparrow singing from his low perch on a wire fence. Nearby another Eastern Kingbird was seen, this one feeding young on a top barbwire.

Our tour now took us to some narrow country-road wooden bridges, preferred nesting sites of the Say's Phoebe. Although their nesting season was over, we were fortunate to see four of these uncommon birds. One individual was darker than those Mr. Bryant usually observed. Most of the nests of this phoebe seen by Mr. Bryant were under wooden bridges, although one had been found on a steel girder under a cement bridge. While we were observing these birds, one of the phoebes began to call from the top of a cornstalk. Ordinarily these birds are not heard calling as late as August.

Our next trip of the morning was to a grassed valley about four miles distant. A dry treeless stream-bed meandered through a field of wild hay mixed with brome grass. Here a few days earlier Mr. Bryant had seen Burrowing Owls. The field on the north side of the creek was perforated with what appeared to be badger dens. Bird droppings were noticed at the entrances to these dens, but otherwise no birds were in evidence. It was at this field that Mr. Kent heard the weak call of the Henslow's Sparrow, a song with which we had become familiar at the Hayden prairie (See *Iowa Bird Life*, December 1959).

Although it was close to noon, we decided to have one last quick look at the spot where we had seen the two female Blue Grosbeaks. We still hoped to have a good view of a male. On driving into this field again we flushed three Gray or Hungarian Partridges. No male grosbeaks were clearly seen, although the song was heard at this time. The thick cover of the boxelder and the plum thicket gave too much protection for sight records in this instance. However, we did see a Black-billed Cuckoo carrying a large worm, possible evidence, at least, of another late nesting.

The morning was now complete with at least three Blue Grosbeaks and four Say's Phoebes. We now returned to the Bryant home where Mrs. Bryant and daughter, Sylvia, had a wonderful steak dinner ready. Now joined by the Bryant boys, John and Curtis, we ate as is only possible on the best of Iowa farms.

Bird life is relatively inactive during the early part of any hot afternoon. This siesta idea, of course, is sound for man too. Consequently we visited with the Bryant family and later walked through their backyard. Again an active August nest was found when an American Goldfinch flushed from her brood 5 feet up in a Chinese elm. A Dickcissel had also built a nest, now abandoned, in another small elm. This latter nest was about 6 feet from the ground. Anderson states:

Many observers give the (Dickcissel) as building its nest on the ground, but of the dozens of nests which I have examined none were directly on the ground; a few were placed in clumps of tall grass a few

inches above the ground, several in Canada thistles, and the majority in small bushes and low trees, rose-bushes, willows, wild crab, scrub-oak, wild cherry, apple trees, etc., from a few inches to three and one-half feet above the ground.

Our departure time was past due, but we decided to have one last view of the Burrowing Owl meadow. On arrival at that place Mr. Bryant and I walked slowly across the area. Suddenly one of the owls flushed from the ground ahead of us, flew across the little valley, and alighted on the far hillside which we had not earlier examined. Our binoculars now showed that this bird lit with a little group of other Burrowing Owls standing on a small mound of dirt thrown out of a burrow. They proved to be very wary, and would not allow a close approach by Mr. Kent. The five owls probably were a family of three young and two adults. It is barely possible that this was the only nesting Burrowing Owl family in Iowa this summer.

The continuance of this small colony will depend in large measure upon an interested land owner, neighboring farmers, and others who might disturb this unique species. Included also is a needed toleration of the badgers or woodchucks that furnish the immediate protective nesting burrow. In other words, there is a rather fine adjustment needed among these Burrowing Owls, badgers, and man. Farmers particularly might enthusiastically protect this little owl. According to Bailey, a large part of its diet consists of "immense numbers of noxious insects such as grasshoppers, crickets, beetles . . . mice, rats, and ground squirrels . . ." A further protective word might be said about the risks of well-intentioned bird observers and bird-banders who could draw ill-considered attention or disturbance to this delicate balance between life or extirpation.

After a hurried thanks to the Bryant family who had so delightfully sponsored the expedition, Mr. Kent and I started toward eastern Iowa. We paused long enough in Sioux City to look up my friend, Mr. William Youngworth. He and Mrs. Youngworth graciously received us, and the conversation once more emphasized the special contributions which north-west Iowa makes to the ecological pattern of the Midwest. Once again Mr. Kent and I restarted our eastward journey. The heat of the return drive was soon forgotten, but Fred and I will always remember the August bird nesting expedition to Plymouth County, Iowa.

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REPORT OF THE FALL MEETING, SEPTEMBER 13 AND 14, 1964

DR. MYRLE M. BURK, SECRETARY-TREASURER

RR #2
WATERLOO, IOWA

Early Saturday morning enthusiastic birders, members and friends of the Iowa Ornithologists' Union were tramping the ridges and valleys of beautiful Bellevue State Park, looking for the elusive migrants, soaring birds of prey, waterfowl, and shore birds.

The host and hostess, Myrle and Margaret Jones, made the Lodge the cheery center for reunion of friends, both old and new. Gay groups gathered about the huge fireplace, with its blazing logs, to visit and exchange birding experiences.

Dr. Robert Vane called the meeting to order for the planned program; he asked for an applause of appreciation for the Jones'. He also requested an expression of thanks to Mrs. Evelyn Hanna, Vice-president, for her part in preparing the program and the descriptive bulletin sent to all members.

The theme of the first discussion of the evening was "Pesticides" led by Charles C. Ayres, Jr., Ottumwa, chairman of the committee for the study of the problems arising from the use of insecticides and herbicides. In the discussion these points were emphasized.

1. The problem must be approached from the standpoint of public health.
2. The disadvantages of Audubon Clubs and other non-profit organizations in trying to introduce and/or influence legislation controlling the sale and use of pesticides.
3. Chlordane and other extremely poisonous insecticides may be purchased without question. Why can a youngster buy a DDT bomb but cannot buy another poison without a prescription?
4. A bird stores excess DDT in fatty tissues; under stress of hunger or fatigue from migration, the DDT is released and the bird sickens and dies. What happens to human beings under like circumstances of depletion of body tissues is not known.
5. Doctors get information regarding the safety of weed and insect killing products from a chemical company (?)

Charles Ayres has literature on this problem. Other references are:

"An Introduction to Pesticides" by Robert L. Rudd, **Audubon Magazine**, July-August, 1964, and book, see review, **Iowa Bird Life**, Sep., 1964 p. 73.

"How Insects Resist Insecticides" by David B. Peakall, **Audubon Magazine**, January-February, 1964.

"Rachel Carson Answers Her Critics" by Rachel Carson, **Audubon Magazine**, September-October, 1963.

"Test Show Forty Species of Birds Poisoned by DDT, by George Wallace and Richard F. Bernard, **Audubon Magazine**, July-August, 1963.

Peter C. Petersen, Jr., reported that the 1965 Spring Convention will be held at Davenport, May 14, 15, and 16 at the Davenport Public Museum. Dr. Alfred Bailey of the Denver Museum will show one of his Galapagos films Saturday evening. Since this is a joint meeting with the Illinois Audubon Society, field trips into Illinois will be held Saturday and Iowa field trips on Sunday.

Past presidents of the I.O.U. were introduced by Dr. Vane. Six responded: Dr. Peter P. Laude, Iowa City; Charles C. Ayres, Jr., Ottumwa; Peter C. Petersen, Jr., Davenport; Myrle L. Jones, Bellevue; John Paul Moore, Newton; and Dean Roosa, Lehigh. Fred Pierce, Winthrop, long time editor of **Iowa Bird Life** and a Charter Member, and the past vice-president Myra Willis, Cedar Rapids were also introduced.

Dr. Vane quoted the following from **The Loon**, publication of the Minnesota Ornithologists' Union, written by Janet Green:

"What constitutes a good bird record?"

1. Names of all observers who observed bird, at least three.
2. Exact date and location.
3. Length of time bird observed.

4. Distance from bird.
5. Light and weather conditions.
6. Optical instruments used.
7. Appearance of bird in field.
8. Names of field guides and other references.
9. Experience of observers.

Nature Conservancy, the organization dedicated to saving as much of remaining native areas, large or small, as possible, is now represented by an active chapter in Iowa. Paul D. Sorenson, Botany Department, University of Iowa, Iowa City, is Chairman. Nature Conservancy was one of the most active opponents of the building of ski runs in Pilot Knob State Park. J. P. Moore suggested that members of the I.O.U. who actively opposed this project be given a vote of thanks.

The remainder of the program consisted of slides of birds and birders shown by Myrle Jones, the old and the new; John Paul Moore, poses of Swans, Donald Yeager, the young of Barred Owls and Red-tailed Hawks; and Jack McLane, waterfowl and shore birds.

Sunday morning, after a hearty breakfast at the lodge, members scattered for bird finding. The hills were beautiful with trees; and everywhere goldenrod, various hued Aster sp. and sunflowers.

At noon the group met at the Presbyterian Church for a bountiful chicken dinner. Dr. Vane expressed the thoughts of the members present in thanking Rev. and Mrs. Nelson and the ladies of the church who served the fine breakfast and delicious dinner. These courtesies will add to the memories of a fine outing at Bellevue State Park; guests of Myrle and Margaret Jones. Many thanks for a good fall meeting.

The following is a list of the birds seen both Saturday and Sunday. Myrle L. Jones, compiler. 85 Species.

Pied-billed Grebe, Great Blue Heron, Green Heron, Common Egret, Black-crowned Night Heron, Mallard, Blue-winged Teal, Wood Duck, Turkey Vulture, Sharp-shinned Hawk, Cooper's Hawk, Red-tailed Hawk, Broad-winged Hawk, Osprey, Sparrow Hawk, Coot, Killdeer, Spotted Sandpiper, Lesser Yellowlegs, Herring Gull, Ring-billed Gull, Caspian Tern, Mourning Dove, Yellow-billed Cuckoo, Barred Owl, Common Nighthawk, Chimney Swift, Ruby-throated Hummingbird, Belted Kingfisher, Yellow-shafted Flicker, Red-bellied Woodpecker, Yellow-bellied Sapsucker, Hairy Woodpecker, Downy Woodpecker, Eastern Kingbird, Eastern Phoebe, Empidonax sp., Wood Pewee, Olive-sided Flycatcher, Horned Lark, Tree Swallow, Rough-winged Swallow, Barn Swallow, Cliff Swallow, Blue Jay, Common Crow, Black-capped Chickadee, Tufted Titmouse, White-breasted Nuthatch, House Wren, Catbird, Brown Thrasher, Robin, Eastern Bluebird, Ruby-crowned Kinglet, Cedar Waxwing, Starling, Yellow-throated Vireo, Solitary Vireo, Red-eyed Vireo, Philadelphia Vireo, Tennessee Warbler, Nashville Warbler, Cape May Warbler, Black-throated Blue Warbler, Palm Warbler, Connecticut Warbler, Wilson's Warbler, House Sparrow, Eastern Meadowlark, Red-winged Blackbird, Common Grackle, Scarlet Tanager, Cardinal, Rose-breasted Grosbeak, Indigo Bunting, American Goldfinch, Rufous-sided Towhee, Savannah Sparrow, Vesper Sparrow, Chipping Sparrow, White-throated Sparrow, Lincoln's Sparrow, Song Sparrow.

Note:—A Snowy Egret was seen near Maquoketa on Saturday.

REGISTRATION

BELLEVUE:—Mr. and Mrs. Myrle L. Jones

BURLINGTON:—Peter Lowther, Jack McLane, Suzanne R. Water

CEDAR FALLS:—Gertrude Bode, Frances Crouter, Annette Haffner, C. B. Madsen, Mrs. Charles Schwanke, Maxine Schwanke, Mrs. K. A. Velie
 CEDAR RAPIDS:—Mr. and Mrs. Beryl W. Layton, Lillian Serbousek, Gene Ulvestad, Dr. and Mrs. Robert Vane, Myra G. Willis
 DAVENPORT:—Mr. and Mrs. Peter C. Petersen, Jr.
 DES MOINES:—Mr. and Mrs. Lester W. Haskell
 DUBUQUE:—Mr. and Mrs. Basil Beal, Ival M. Schuster
 DYERSVILLE:—Mr. and Mrs. Emmett Polder
 FARLEY:—George Crossley
 GOLDFIELD:—Dean M. Roosa
 IOWA CITY:—Lee Eberly, Dr. and Mrs. Peter P. Laude
 KILLDUFF:—Ann Louise Moore
 LAKE CITY:—Eileen D. Miller
 MARION:—Lucile Liljedahl
 NEWTON:—Mr. and Mrs. J. P. Moore
 OSKALOOSA:—Mr. and Mrs. Keith D. Layton
 OTTUMWA:—Mr. and Mrs. Charles C. Ayres, Mr. and Mrs. Bud Hallberg, Leona L. Havens, Mrs. I. M. Snook, Pearl C. Walker
 ROCKWELL CITY:—Mr. and Mrs. George Wright
 WATERLOO:—Myrle M. Burk, David Falks, R. M. Hays, Margaret Nagel, Edith Wallace
 WHEATLAND:—C. Esther Copp
 WINTHROP:—Mr. and Mrs. Fred Pierce

FIELD REPORTS

September was cool and with somewhat more than normal rainfall. In Des Moines there were 13 days with measurable precipitation and five days with a "trace." October was mild and extremely dry, Davenport, for instance, had only .01 inch of rain. The moisture situation militated against an interesting shorebird migration, as many ponds had grown up in grass and weeds so that when rains did come, there were few attractive mudflats. At Union Slough a six-inch rain on 6 September raised the pool levels so that all shorebirds left the area. Practically all contributors thought the migration poor, both as regards shorebirds and passerines, and both Kent and Petersen commented on the lack of definite waves.

Loons, Pelicans. Common Loons were first seen at the Des Moines Impounding Reservoir on 5 November when four were reported. A large flock of White Pelicans was seen near Sioux City on 7 September, with another 250 on 3 October, (DH). The largest number at Union Slough was 21, (PF), but a flock of 170 was at Goose Lake on 23 September, (JF).

Hérons. A Great Blue was still at Hawk Creek 1 November, (Dick), and another late one was seen 3 November at Swan Lake, (FK). No Green Herons were mentioned, and few were seen in Polk Co. A Little Blue was reported by Mrs. Berryman as being at Brower's Lake in late August, (DH). Another was seen on three days north of Burlington by Otter Island, (PL). Common Egrets were seen: on 5 September on the Upper Iowa River, (DP), and another at Goose Lake on 6 August, (JF), but four was the largest number at Union Slough, (PF). An immature Yellow-crowned Night Heron was near Des Moines on the late date 11 September and was probably hatched in the area.

Ibis. A White-faced Ibis found at Goose Lake is described in a separate note.

Geese, Ducks. Few geese were reported: only two flocks early in Oc-

tober, (GB); very low numbers, (PF); went through early with large flocks 29 September and 1 October. A few White-fronted in the early flock but lots later, according to Wm. Felton, (DH); fewer than usual, went over fast with fine weather, (DG). Wood Ducks were up at Big Wall Lake, (Dick), and peaked at 1,700 at Union Slough. Quite a few ducks came through early with the geese, but fewer than usual American Widgeon and Pintail, (Felton-DH). Wayne Jensen reported large flights on 18 October, Mallard, Gadwall, Am. Widgeon and Pintail, but few Canvasback and no Redhead or teal, (DH). Three early Redheads on 7 September at Goose Lake, (DP). The total Union Slough population on 22 October was 12,000, largely Mallard and Pintail. Very few ducks were at the Impounding Reservoir until 5 November when about 100 Lesser Scaups appeared with a few Widgeon, Ruddy, Ring-necked and Hooded Mergansers, along with small numbers of Mallards.

Vultures, Hawks. Turkey Vultures were: more abundant than usual and seen almost daily in September with 23 on the 10th, (DG); seen in numbers the past summer and fall which is unusual, 22 records, some of which may be repeats, (JK); 10 adults and immatures at Ledges, (DP). An accipiter flight from 6 to 21 September was early and larger than usual. A big concentration around the 9th, (DR). Eleven Sharp-shinned were banded at Davenport between 14 September and 4 November (PP). While removing a netted bird Mrs. Gladys Black had a Sharp-shinned attack a House Sparrow which was enmeshed only six feet from her. The hawk was caught also, and as Mrs. Black was without gloves it was removed at the expense of severely scratched hands. After being caged the Sharp-shinned was exhibited for several days to the school children and then released. Sharp-shinned were seen on 16 and 19 October, and Cooper's on 15 and 18 September, (EB). Red-tailed: seemed to be up, (DP); down with fewer immature, (DR); fewer than usual, (DG); appeared to be an unusual number of immatures this fall, (DH); more in October than in previous years around Des Moines, but few had the red tails of mature birds. There was a wave on 17 October with 20 seen, (FK). A Harlan's was seen on a fence post at very close range on 10 October, (JK). No Red-shouldered were seen, (DR, DP, WHB); but two were at Wyth Park on 3 October, (RH) and a pair south of Rock Rapids was reported by George Marsh, (DH). There were several large flights of Broad-winged; over 500 seen in a half-hour over Goldfield on 15 September and 125 on 22 September, both preceding a cold front, (DR); a flock estimated at 300 was high over Eagle Lake on 14 September and seen by Joe Kennedy; a small movement and very high on 13 September, (PP). Swainson's was seen on 31 October, (RH), and "the usual sprinkling" of Swainson's and Kridler's (EB). Rough-legged first appeared 3 October, an early date, (DR). One in the dark phase was at Ames, 23 October, (DP), while six were near Des Moines on 31 October and 1 November (HP). Two Bald Eagles were seen at Lynxville Dam on 1 November, (DK), while an immature was at Union Slough from 9 to 18 October. Marsh Hawks: were plentiful, (Dick); but fewer than usual, (DG); and scarce, (WHB). Ospreys were at Waterloo on 1 and 8 September, (RH), and one was seen at Union Slough on the 12th. A Peregrine was at Goose Lake on 20 October, (JF), and a Pigeon Hawk was seen over Goldfield on 21 September, (DR). Sparrow Hawks were: down, (DR); only one seen, (GB); and scarce, (WHB); but 30 were seen in a 10-mile drive, (DH). A noticeable influx of Red-tailed, Rough-legged and Sparrow Hawks through October was noted by Wm. Felton, (DH). There was a good flight of Red-tailed, Marsh, and Sparrow Hawks, (EB).

Pheasants, Cranes. Pheasants were down according to the only report, (Dick). About 25 September George Marsh saw 50-60 Sandhill Cranes flying south just below Sioux City, (DH).

Rails, Plovers, Sandpipers. Some of the comments regarding the shorebirds: few seen as ponds were low and grew up in weeds, leaving no mudflats, (DG); poor, (GB); poor, as not enough water, (JK); almost nothing but Solitaries, (JF); very poor around Des Moines. On three occasions in September and October an unidentified rail was flushed while mowing tall weeds or hay some distance from water or marsh, (DG). Coots were numerous in places, 2,000 on 24 October at Big Wall Lake, (Dick); 600 at Goose Lake on 16 October, (DP); and lots from early September to late October, (DH). On 24 October there were 42 Killdeer in one field, (GB); and from 28 August to 7 September there were 25 or 30 around Blue Lake, (DH). Union Slough had from six to 12 Woodcock in October. Snipe were missing at Lamoni, but as many as 160 were at Union Slough. No report of migrating Upland Plover was received. At Credit Island there was a good August movement with Pectorals most numerous, considerable numbers of Lesser Yellowlegs, scattering of Baird's, Semipalmated and Least Sandpipers, and some Semipalmated Plovers. (PP). Fifteen of the latter were at Goose Lake on 7 September, (DP). Shallow ponds were thickly covered with shorebirds from the end of August to early September, six Marbled Godwits being included, (DH). Eight Hudsonian Godwits on 18 October were a first fall record, (JK). Avocets were seen at Blue Lake on 29 August, (DH), and at a Hawarden sandpit on 3 September by Mr. and Mrs. Elden Berge, (EB). Golden Plover were seen on 14 September in several flooded fields north of Des Moines by Joe Kennedy, (WHB).

Gulls, Terns. Numerous Franklin's Gulls were seen: 130 on 24 September and 1,500 on the 27th with an estimated 1,000 going over all day on 18 October, (JF); 2,000 on 3 and 4 October, (DH); 75 on 14 September at Garner; and 4 on 8 October, (JK). Two Common Terns on 24 August, and 20 on 23 September were noted, (JK).

Doves, Cuckoos. A good crop of Mourning Doves with 100 per mile on some gravel roads, (DG); At least normal numbers around Des Moines; but, down from '63, (PP); and scarce, (GB). Yellow-billed Cuckoos numerous and a young in nest on 11 August, but very few Black-billed, (WHB). Cuckoos plentiful, (GB).

Owls. A Barn Owl reported by Mrs. Hewett at Jesup, (RH). The colony of Burrowing Owls left about 15 October, (EB) while the remains of another Burrowing was found 26 September in Fremont Co. by Jim Rising of the University of Kansas. An early Long-eared, assumed to be a resident, was seen 21 September, (EB). Others were: seen in late September, and one banded 29 October, (PP); one at Goose Lake on 20 October, (JF). Only three Saw-whet were banded in October while 16 were banded the same month a year ago, (PP). Two Short-eared found on 1 November by Dr. and Mrs. Laude were considered early, (FK).

Goatsuckers, Swifts, Hummingbirds. Seven Whip-poor-wills were banded on 11 September, two on the 12th, and the last on the 13th, (PP). A flock of 50 migrating Nighthawks was seen on 4 September, (DG); about 25 were seen on each of the 17th and 19th of September, (WHB). Migration of Chimney Swifts described as "big" with 200 seen entering a chimney at one time, (GB). Hummingbirds were fewer than 1963, (GB); seven were banded with the last on 16 September, (PP).

Woodpeckers, Flycatchers, Swallows. Yellow-shafted Flickers down, (DR); but thought up in Des Moines. Sapsuckers, fewer, (JF); but up, with 15 banded against 8 in 1963, (PP). Hairy Woodpeckers up, (Dick). A Western Kingbird was seen 14 September, (DR). A good migration of Eastern Kingbirds at Des Moines. The last Eastern Phoebe was banded 18 October, a late date; Yellow-bellied Flycatchers were up, with 33 banded; Acadian, 13

banded, up; Traill's, 20 banded, average; but only one Olive-sided Flycatcher, (PP). One of the latter remained at Jefferson from 25 August to 16 September, (JF), but few were seen at Des Moines. A Scissor-tailed Flycatcher west of Onawa was reported by Mrs. Coberly but no date mentioned, (DH). At least 350 Bank Swallows were noted on 12 August, (PP), and more than 1,000 Cliff Swallows were seen on 14 August, (DG).

Nuthatches, Creepers, Wrens. Red-breasted Nuthatches down, (PP) with none reported at Des Moines. Brown Creepers plentiful, (GB), and way up, (PP). Four Winter Wrens banded in September and October, (PP), and one on 16 September was very early, (JK). A Bewicks was seen on 2 September, (JF).

Mimics, Thrushes. One Mockingbird was recorded in Des Moines on 19 October. Catbirds were plentiful, (GB); up, with 160 banded, (PP). The migration of thrushes; very poor except for Robins and Bluebirds, the latter as common as ever seen, (JF). Robins fewer, (GB); very plentiful, (DH); and, excellent migration, (DR). Lots of Robins, few Swainson's, and few, if any, Hermit or Gray-cheeked, (WHB). Bluebirds: up, (GB); one flock of 12-15, (DH); more than 30 seen on 26 July, (DG); continue to improve in numbers with a good flight 24 October, (DR). Hermit Thrushes last seen 15 October, an early date, Swainson's also left early with last seen 28 September. Gray-cheeked way down, but five Veerys banded 26 and 28 August, (PP).

Kinglets, Pipits. More Golden-crowned than in 1963, (GB). Ruby-crowned up with 217 banded, 25 in one day on 10 October, (PP). A wave of Ruby-crowned on 26 September, (JK). A Water Pipit found at Big Marsh 31 October, (RH); about 30 seen daily after 20 October while plowing, (DG).

Vireos, Warblers. The vireo migration was: poor, (DR); but, good, with a big wave on 15 September for three days, (JF). Yellow-throated had a late nest at Coralville with young banded 8 August, (PP). Solitary were up, (PP-WHB), and very common, (JF). Red-eyed were down a little, (PP); and many fewer than last year, (WHB). A Red-eyed eating Mountain Ash berries was reported, (RH). Philadelphia were thought way up, (PP); and a few were seen at Hamburg, (EG). A Warbling banded on 26 September was a "first" for the fall season, (PP). The best warbler migration appears to have been at Jefferson where it was called very good, with a very large wave from 15 to 17 September with 16 species including Black-throated Blue, Golden-winged, and Blue-winged. Another wave was from the 27th to 29th. From Sioux City the comment was very few, and nothing out of the ordinary except an injured immature Cape May found by Bob Nickolson, (DH). Other reports: fairly normal, no noticeable peaks, (PP); good migration, (GB); poor, except Myrtles, (DR); a few Myrtles, Pine, Yellow and Palm, (JK). First arrivals were on 17 August, an average date, but more numerous than usual with Black-and-white, Blackburnian, Chestnut-sided, Magnolia, Nashville, Wilson's and Canada. A small wave occurred on 31 August, (DK). A wave through Ames on 6 September included Black-and-white, Canada, and Wilson's with Golden-winged. A positive identification of a Cerulean on 3 October, (DP). Tennessee, down; Orange-crown, up; Nashville, up; Magnolia, down; Myrtle, a little up. A Louisiana Waterthrush on 21 August and a Yellow-breasted Chat on 28 September were the first ever banded in the fall, (PP). A Black-throated Blue in Des Moines was seen for several days beginning 18 September. A very late Nashville on 18 October. A wave of Myrtles on 3 October, with very few before or after that date, (WHB).

Blackbirds. Seem to be down, (PP). A mixed flock of 6,000 at Big Wall Lake, (Dick). A flock of 200 Rusty at the Impounding Res. on 22 October, (WHB); 40 at Goose Lake 16 October, (DP); and 2 on 30 October, (PP).

About a dozen Brewer's closely following the plow the last 10 days of October, (DG); and seen for three days early in October, (JK). Tremendous numbers of blackbirds with thousands of grackles seen flying to and from a roost, (DH).

Sparrows, Finches. Cardinals fewer, (GB); a nest found on 18 September with several young, one still downy, (EG). A pair of Blue Grosbeaks seen in mid-August acted as though nesting, (DH). Indigo Bunting down, (PP), but in usual numbers at Des Moines. Purple Finches first seen on 28 September were late and fewer in numbers. A Pine Siskin on 9 October at Des Moines was early. Goldfinches: fewer, (GB); average, (PP); numerous, (WHB); definitely up, (Dick). Lark Buntings seen on 26 July and 28 August were assumed to be females but on the latter date could be fall males, (EB). Savannah Sparrows were numerous, (EB). Two LeConte's Sparrows were at the Impounding Res. on 1 November, and one on the 5th, (WHB); and two near Indianola on 25 October, (HP). A Baird's Sparrow was reported from Brower's Lake by Mrs. Berryman, (DH). Chipping Sparrows up, Field Sparrows down, (PP). This is a Harris' Sparrow year! More than 1963, (GB); best in three years, (Dick); good migration, (DR); hundreds reported by several observers, (DH); many, (EB); most ever seen, (JF); saw 20 at several places, (FK); very numerous, (WHB). White-throated Sparrows good and early, (DR), usual numbers, (WHB); but, fewer, (GB). Fox Sparrows best in three years, (Dick); but seem fewer, (WHB). Lincoln's Sparrows good, (DR). An early date for Lapland Longspurs was 20 September when four were seen at close range near Lawler, (RH).

Corrigendum. Field Reports, XXXIV-45 stated that a pair of Canada Geese are reported nesting at Goose Lake near Jewell. Subsequent observations failed to disclose such nesting activity.

Reports from Goose Lake, (JF) refer to the Green Co. location, and those from (DP and Dick) refer to the lake near Jewell.

Contributors: Mrs. Gladys Black, Pleasantville; Eldon Bryant, Akron; John Faaborg, Jefferson; Paul Ferguson, Union Slough; Mrs. Edwin Getscher, Hamburg; Donald Gillaspey, Lamoni; Mrs. Darrell Hanna, Sioux City; Jim Keenan, Ogden; Fred Kent, Iowa City; Dick Knight, Ames; Darwin Koenig, Castalia; Peter Lowther, Burlington; Mrs. Harold Peasley, Des Moines; Peter Petersen, Davenport; Donald Peterson, Ames; Dean Roosa, Goldfield. WOODWARD H. BROWN, 4815 Ingersoll, Des Moines, 50312.

GENERAL NOTES

An Extraordinary Day—On October 20 a friend of mine, Dave Bucklin of Scranton, and I went birding at Goose Lake. It was late enough that we didn't expect to see much. When we arrived we saw a few shorebirds a ways away. As we started toward them, we scared a Peregrine Falcon from some nearby trees. It flew about 30 yards ahead of us and headed over the lake. As it proceeded it scared up many ducks and huge flocks of blackbirds. We then drove around the lake and on the way saw a Cooper's Hawk. We got out of the car on the north edge of the lake and scanned the shoreline for birds. A large, low nest caught our attention and we decided to take a look at it. This was a lucky move. As we approached this nest we saw something on the shore. It was fairly large, dark and had a long downcurved beak. It was an Ibis. We checked it out very carefully. When we got home we checked all our books and came to the conclusion that it was a White-faced Ibis. Although there have been more reports of Ibises in recent years,

it was quite unexpected. Also, what was it doing here so late in the season? It's unexpected things like this that make birding such an exciting hobby. JOHN FAABORG, 705 W. Madison St., Jefferson.



Upland Plover
Upland Plover Chicks
Photos by Homer Rinehart

Banding Experiences—The banding of birds has given us a great many new thrills in the past two years. We have both been bird watchers for over thirty years—but when we actually started handling the birds we have seen so much more and have had a better opportunity to study them and learn about their habitat and migration.

One of the outstanding experiences was the banding of four Upland Plover chicks. Mrs. L. R. Grimes, one of the most dedicated bird watchers, reported the sighting of some Upland Plovers near their farm. We were able to get pictures of the adult on color film (reproduced here in black and white). After repeated sightings we decided they were nesting in the area

There were many morning and evening trips to the area searching for the nest. We knew we were near because not only one adult, but as many as four would hover overhead whistling in rich, clear, melodious notes. The long drawn mellow whistle is unlike anything we have ever heard. On many occasions they would flutter down and light within sixty feet, running through the grass, uttering low, plaintive whistles, then up into the air again, wings fluttering.

The real thrill came early one evening when we went through the area to close our nets. We flushed an adult plover that gave the usual broken-wing act. We didn't follow her, but stood still only to hear some "peeps". We carefully searched in the grass and found four cute little downy chicks. They were only a few days old, and we believe were being moved to another area by the plover. We carefully checked our Roberts Manual to verify our find, then banded and photographed them. We put them back in the same clump of grass and left the area to give the plover a chance to come back to her chicks.

After about thirty minutes, we went back to the marked spot to make sure she had returned because we hadn't heard nor seen her during the banding operation. She had apparently made her way quietly back to her chicks because she really put on the broken-wing act this time—tumbling and rolling in the grass as she tried to pull us away. We left immediately so she could go back for her family since it was almost dark.

In all our years of bird study, this is the first nesting record in Marshall County of which we have any knowledge. An occasional sighting was noted last year about one mile from this nesting site. We had never considered the Upland Plover one of our summer residents until 1964, because they were rarely seen by any of our friends. Since our banding of these chicks, we have sighted several half-grown plovers in a field about three quarters of a mile from the nesting area, so we know there were several broods hatched in this area.

There have been other interesting things happen during our banding. We had nets at some of the favorite posts where the plover stood guard. We did not net an adult plover, but did get our first Vesper Sparrow. We could not find the Vesper Sparrow nest, even though we knew it was near. The sparrow sat on the top strand of one of the nets for several minutes before darting down toward a large clump of Canadian thistles. It was carrying a large insect, so we felt it was feeding young birds near by. In our search of this pasture, we found two meadowlark nests. One contained five eggs while the other had three young sparsely feathered meadowlarks and a fully feathered cowbird.

We heard and saw many pairs of Grasshopper Sparrows in this field also. We discovered one nest with tiny birds and finally trapped the two adults, at different times, by quickly putting a butterfly net over the grass hummock. We also banded the babies. This was another new species for us.

On July 21, 1963, we banded Swallows from a bridge in South Chickasaw County for about an hour. We netted 20 Cliff Swallows and 1 Barn Swallow at that time. This spring (1964) while on our way to the IOU meeting at Decorah, we stopped at this same bridge to try for some returns. It was quite windy when we arrived so we just sat in the car watching the swallows. While waiting we observed two at the same time that had bands. Later as the wind abated, we put a net under the bridge to try for some of these even though it was still too windy for good results. In less than an hour, we banded 19 Cliff Swallows and had one return from July 1963. To think one of our banded swallows, which had spent last winter somewhere between Brazil and Argentina, had returned to the same bridge!

The farms where we do most of our banding cover an area of about two sections. It is excellent farm land, with corn, oats and alfalfa. There is upland pasture as well as marshy habitat along the small creek that flows through the area. There is heavy virgin timber, as well as small areas of a few trees. On the Grimes farm there is a small pond where there was a Wood Duck nest and the nest of a Green Heron. This habitat lends itself to various interesting banding and birding opportunities. In searching for nests and watching those found, we have learned a great deal about our feathered friends. In this area alone, we found nests of 29 different species and because of repeated sightings and many returns of banded birds, we are certain of 32 other species nesting here.

As of Oct. 15 we have banded 116 species and 1983 individual birds in 1964. This has taken a great deal of time—but we have derived a great deal of pleasure and knowledge of the birdlife in our banding territory. HOMER AND NORENE RINEHART, Box 187, Mashalltown.

Red-tailed Hawk Nesting Cycle—This past spring a pair of Red-tailed Hawks nested directly in front of our house, about 200 ft. from the front door. The nest was in a large bur oak about 50 ft. high in a rather heavy growth of timber, and was well concealed. Before the leaves were out it was very hard to see the nest because of the branches and twigs of the surrounding trees and when the leaves were out it was impossible to see the nest except from a spot at the foot of the tree.

I first noticed the hawks in November. The pair spent considerable time perched in several large trees in a rather open spot south of the heavy woods, and I saw them almost daily sitting in these trees, throughout the winter.

On the morning of February 14, I was watching the hawks, and saw one of them fly to a red cedar tree, break off a twig, and carry it to a nest which the crows had used last year which was built in the bur oak tree. According to Bent, *Life Histories of N.A. Birds of Prey*, p. 151, these hawks place a sprig of cedar or pine in the nest they are going to use. For the next month the hawks made almost daily trips to the nest, but only for short periods of time spending most of the days perched in trees or out of sight hunting. During this period I once saw one of the hawks carrying in its beak a long strip of bark or grape vine but usually the sticks they carried were small and hard to notice. Several times during the nesting period the hawks broke off small twigs of cedar and carried them to the nest.

Because the nest was so close to the house, I was afraid that I would scare the hawks away if I went down to the nest tree so I could not tell when the female started to lay. It was difficult to see the nest, because of the branches and twigs, but the latter part of March, I did see the female sitting on the nest and several times saw the hawks change places on the nest. During the month of April, I saw the male carry a large snake to the nest. Had not seen much of female but saw the male daily. For the next month both hawks very active. Have seen the male bring food to the nest, once a small snake and the other time a mouse.

On May 23 I walked down to the foot of the nest tree. Neither of the old hawks was around, but I could see the head and neck of a young hawk looking over the edge of the nest. The head and neck was covered with a dirty or yellowish down and the hawk appeared to be a week or two old. It seemed to be quite alert and well able to hold its head up and gaze around. Could not see the body so I could not tell if the body was feathered. A week later when I went to the nest tree a young hawk was perched on edge of nest. It was fully feathered with some of the down still on the neck and head. It looked as large as the adults but the underside was streaked. The bird

showed no fear and merely looked at me. A few days later it was in the nest and all that I could see was the head sticking over the nest. On June 6 when I went to the nest tree, the young hawk was out of the nest and as I came close flew away in a rather clumsy manner striking some of the branches.

During the rest of the summer saw both the young and the adults soaring. Never all three at the same time. Also could hear the young "peeping" quite often in the woods. By September, the hawks seemed to have left.

During the time that the hawks were around, I marveled at the ability of such large birds to fly through heavy woods without any difficulty. Most of the time that they were feeding the young they seemed to fly to the nest through the woods, as I only saw them bring food on three occasions. Once the food was a snake and the other times they brought mice. I believe that most of their food is taken in the timber. Although I saw them soaring many times, I seldom saw them dive down, as though to capture food. The few times that they did dive to earth, the wings were folded to the body, the head pointed down, and they descended at terrific speed. Once I saw this happen and the hawk lit momentarily on a tree limb and immediately dropped to the ground, where it was out of sight.

The soaring of these hawks is a beautiful sight, and is the way they are most often seen. Often they would hover, much as a Sparrow Hawk, remaining suspended over one spot for some time without any movement as though hung in the spot. In a strong gusty wind they head into the wind and maintain their position by frequently drawing the wings into the body slightly and dipping the tail forward. The hawks were not shy and the male hawk used an electric pole as perch almost daily. The pole was in front of the house and about 100 ft. from the house. He would sit on the pole for an hour or more.

Smaller birds paid no attention to the hawks unless the hawks approached their nest. At first, before the small birds had started to nest, I many times saw them perch in the same tree as the hawk. Neither paid any attention to the other. In June a pair of Blue Jays built a nest near the electric pole and when the male perched on the pole the two jays subjected him to a continuous dive bombing attack. He kept watching and would duck as they dived at him but otherwise paid no attention to them, and I never saw either of the hawks make any effort to catch any other bird.

One of the most interesting things was to watch the crows and the hawks. About 1000 ft. north of the hawk nest pair of crows nested, and every time the hawks flew over this spot the crows gave chase. As the hawk soared over their nest, up would climb the two crows until they were above the hawk. At first the hawk avoided the diving crow by dipping a wing and slipping down and sidewise. Later after nesting the hawks became less tolerant and as the crow dived the hawk would turn on its back and thrust its talons at the crow. The crow always seemed to turn at the last moment, and I never saw any actual contact. One afternoon the female was soaring over the spot where the crows had their nest and for half an hour this aerial duel went on, the hawk screaming every time she turned her talons at the crow. Every few days I saw this duel and only twice did I see the hawk make any hostile move toward the crows. Once, when the female was being pestered by three crows, the male who had been out of sight, came flying out of the woods and made directly toward one of the crows. At once all three crows flew away. The other time, the female hawk was being chased by the crows and as one of the crows flew by her she turned as though to make a move towards it and immediately the crows flew away.

Although I have seen many hawks, never before have I been privileged to have the opportunity of seeing them almost daily, as much a part of the every day scene as the robins, bluebirds and martins. The thought has occurred to me that since few farmers raise chickens any more and shoot every hawk they see, these magnificent birds may still have a chance of becoming a familiar sight once again. At least, I hope so. ALOIS J. WEBER, R.R. 2, Keokuk.

A North American Nest-Record Card Program—Beginning in January, 1965, the Laboratory of Ornithology at Cornell University will operate a nest-record card program on a continent-wide basis and would like the assistance of everyone.

Through the cooperation of Dr. David B. Peakall and the Onondaga Audubon Society, the Laboratory has carried on a nest-record program on a local basis for two years. The aim of the program which is similar to one used in Britain (see Mayer-Gross, 1962, *Bird Study* 9:252-258), is to collect specific data on bird reproduction in a form convenient for statistical analysis. The results of this two-year trial have been so gratifying that we are encouraged to make the program continent-wide.

For this to be a success we will need the cooperation of all bird observers in all parts of the continent, particularly the United States and Canada. We will also need—because we are certain that regional centers can handle the distribution of data cards and their return to the Laboratory better than individuals—the cooperation of all bird clubs and other societies whose members make field observations of birds.

The Laboratory will provide bird clubs or individuals with cards. The observers will record the contents of each nest found on a separate card and make dated notations on the same card for each subsequent visit to the nest. Each card will then contain all the data from a single nesting. While one observation of a nest will be valuable, additional observations over a period of days or weeks will increase the worth of the record. Our goal is to have hundreds, possibly thousands, of cards containing data on each species from all parts of its range.

We are well aware that there are other local nest-record card programs in this country and in Canada (see Peakall, 1964, *Audubon Field Notes*, 18(1): 35-38), and, naturally, we do not intend to infringe on them in any way. We only hope that they will cooperate with us and help broaden the scope of the whole endeavor. The net result should be the accumulation of far more data on every species than heretofore and the centralization of these data for comprehensive and intensive study, much as is true of the bird-banding program of the U.S. Fish and Wildlife Service. All of the information from our program will, of course, be available to anyone who is interested. (Our Iowa program will be continued, and cards are available from the editor.)

Clearly this is a program in which every person seriously interested in birds can participate, be he a seasoned nest finder or one who merely watches a nest from a window. Local organizations, or individuals not members of local groups, may address all inquiries and communications to the North American Nest-Record Card Program, Laboratory of Ornithology, Cornell University, Ithaca, New York 14850. OLIN SEWALL PETTINGILL, JR., Director.

OBITUARIES

FORREST G. MILLIKIN

The Iowa Ornithologists Union lost one of its past presidents on October 4, 1964, with the passing of Forrest G. Millikin. A member of the union since 1954, Mr. Millikin served as president for the year 1961-62.

Forrest Glen Millikin was born at Hedrick on December 1, 1901, the son of Arthur W. and Estella Palmer Millikin. A graduate of Cornell College, Mr. Millikin was a school teacher, power company employee and county supervisor for Farmers Home Administration. He married Sara Link on June 11, 1925, and was the father of one daughter, Dorothy (Mrs. Bruce Chase) of South Amana.

Mr. Millikin and his wife regularly attended I.O.U. conventions and were always very friendly and congenial. He served the society faithfully and will be missed by his many friends. ed.

HARRY E. JAKUES

A long-time member of the society and well known Iowa naturalist, Harry E. Jaques, passed away on September 18, 1963. Dr. Jaques was a good bird student and was very highly thought of in the Mt. Pleasant area as well as the entire state.

Harry Edwin Jaques was born on July 24, 1880, near Danville and spent most of his life teaching the biological sciences at Iowa Wesleyan College. Dr. Jaques was survived by his wife Winnifred and five children. Perhaps his best known work was his contribution as editor-in-chief of the Pictured Key Nature Series, a group of twenty-five teaching and reference books. He wrote several of these himself and many students get from them their introduction to identification of plants and animals. This note is somewhat delayed as word of Dr. Jaques death was slow to reach us. ed.

BOOK REVIEWS

The World of Birds—James Fisher & Roger Tory Peterson—Doubleday & Company, Inc., Garden City, N.Y.—1964—288 p. many color paintings & photographs, 96 pages of maps in color—pre-Christmas, \$17.95, after Christmas, \$22.95.

In these days when one new bird book follows closely on the heels of another, it is confusing and difficult for the bird student to choose the book that will satisfy his needs and represent a good buy dollarwise. The book under consideration is recommended to all groups. The beginner will find much new and useful information while the experienced birder will enjoy re-reading what he has perhaps read before, but this time presented in the lavish format of a beautifully produced volume. Written in popular, non-technical style and with a well rounded text, it will be enjoyed by almost everyone. The publishers have aimed at the mass market, but the main deterrent may be the high price tag, which is no doubt necessary in a large, colorful production.

It is heavily illustrated with both photographs and colored paintings. Peterson did the latter and it seems that his art work has attained new heights. The book has eye-catching appeal and will hold the reader's attention on every page. One wants to keep right on reading it. It is not a long text. It is not a book for identification, nor a reference work, but rather an absorbing introduction to ornithology, a visual guided tour through the wonderful things in the world of birds.

Four main sections compose the book. They are: 1) Ornithology outlined as a science. 2) The description of the tools, techniques and problems (also delights) of bird watching. 3) A Classification and mapping of all the bird families in the world, with their 8,500 full species. 4) The relation of birds to man, and proper conservation to insure the perpetuation of all groups.

The first chapter discusses the amazing variety and distribution of birds. Polar and oceanic areas have a dearth of bird life. In temperate regions species are plentiful, while tropical climes have an abundance of families and species. Colombia, South America, with its 1,700 species, is cited as the country with the largest recorded number of species. The anatomy of birds with feather structure, pattern and colors, the use of wings and adaptations of other parts of the body are also described.

Chapter II tells how the various kinds of birds live—flightless birds, game birds, water birds, sea birds, birds of prey. Classification by food preference includes fruit-eaters, seed-eaters, omnivorous feeders, insect-eaters, and others. Fine colored paintings of all the groups crowd these pages. "Birds of the Past" occupy Chapter III, and the next chapter discusses "Birds on the Tree of Life," with a colored chart showing each family's place on the tree. Chapter V covers the distribution of birds, with an interesting painting of extinct and rare birds to introduce it. In showing the variation in birds in different faunal areas of the world colored pictures are again employed with fine effect.

In Chapter VI, entitled "Bird Society," the social attitudes in various bird groups are well described. There are sidelights into breeding displays, territorial fighting, construction of nests, sizes, colors and clutches of eggs, brood parasites, fledging periods, adolescence and longevity, instinct and intelligence.

The chapter on Bird Watching (VII) is right up to date with the latest methods of identification and listing used both in this country and in Europe. Beginning bird students can easily chart a course for serious study from the helpful suggestions. There is a section on field glasses and blinds, another on photography, still another on sound-recording. The lure of the list is dwelled upon rather briefly, with mention of the holders of the highest yearly lists and noteworthy regional lists which have been published in book form. Estimating bird populations and censusing certain areas make interesting reading, and we learn that ornithologists of the future have the job of analyzing the distribution of ocean birds, which roam almost the entire world. Progress in the study of migration, and the tie-in with banding, receive a few pages of explanation, followed by a brief resume of life-history studies.

The eighth chapter, pages 144 through 241, concerns "The Regiment of Birds." It is a complete classification and geographical atlas of all the bird families in the world, with colored maps for every family, showing the distribution of each on a world-wide basis. It is the first time this has been attempted in a book, and its importance justifies its taking up so many pages.

Chapter IX, on "Birds and Men," gives much information on how early man depended on birds for sustenance. Methods of taking birds are mentioned. There is a short section on falconry and management of game species. We are glad to learn that "In North America more people now go bird watching than shoot ducks." Quite fittingly four pages are given to the new threat to bird life, the widespread spraying of chemical pesticides.

The book closes with a bibliography and a "Red List" and a "Black List." The first contains the names of 143 species which are in danger, all those birds whose numbers are believed to have dropped below a population of 2,000. Some of them, such as the Whooping Crane with a 1963 population of 33, are nearly extinct. The second, or Black List, contains the names of those gone forever.

If you don't feel you can afford this book, borrow it from your public library. It will be well up front in the parade of new bird books, so don't miss it.—F. J. P.

Birds Over America—Roger Tory Peterson—Revised ed.—Dodd, Mead & Co., New York—1964—342 p, 105 photographs by the author—\$7.50.

This book was first published in 1948 and immediately was a success. It ran through numerous printings and finally went out of print. However, there was so continuous a demand for it through the following decade, the publishers decided to bring out a new edition.

Since it was largely written in the present tense, the intervening 16 years changed much of it to past tense. The new book is a photographic reprint, and the lines that had to be changed from present to past have new type fitted in cleverly so the changes are hardly perceptible. Where a new interpretation was needed, or present-day data were required, new lines of equal length were substituted for the old and the pages run exactly the same number of lines. By this method no changes were needed in the index as the paging is the same. The photographs suffer a little in the process. In the original edition, they were printed on separate plates on glossy paper. In the new edition they are printed on the same paper as the text and are not as sharp as the originals.

It is an interesting book, being autobiographical to a great extent. Thousands of new birders have arrived since the book first came out, and they will be eager readers of Peterson's personal adventures with birds. Some of us oldsters who read the story years ago will enjoy a re-reading.

Peterson's style has always been distinctive—informal, entertaining, authoritative, and instructive. Writing of the sport of birds trips and the compiling of lists, he describes some of his best trips, in one of which all records were broken. Some of his companions on these trips were famous names in those days, but none of them achieved as much fame as did Peterson himself in the passing years.

One chapter covers the ever-popular Christmas bird census. Another charts the rise and fall of bird populations from the time of Audubon to the present. Others describe the migration of birds, the results of bird-banding and various aspects of bird study. Most entertaining are the author's own expeditions, which include studies on the Atlantic coast, Hawk Mountain in Pennsylvania, the Dry Tortugas off the coast of Florida, and localities in the West and Southwest. He visited the haunts of the Ivory-billed Woodpecker in the swamps of the south and the nesting grounds of the Kirtland Warbler in Michigan. Indeed, he looked for birds in nearly every one of the United States.

Now a world famous artist and ornithologist, Peterson's stature has grown with every passing year. The new printing of his book is certain to attract an even larger number of readers than the original edition.—F. J. P.

I Went to the Woods, The Adventures of a Bird Photographer—Ronald Austing—Coward McCann, Inc.—1964—144 p. 9 color & 48 black and white ills.—\$5.00.

The subtitle of this book "Adventures of a bird photographer" quite nicely describes this lively autobiography of the authors adventures and problems of finding, catching and photographing birds, and will be enjoyed by others, as well as by ornithologists and photographers.

Starting with vivid accounts of his first boyhood experiences of climbing to hawks and owls nests, learning to photograph them with simple equipment, on through his rapid progress to becoming a very fine naturalist and a top photographer, the book is full of interesting and cogent observations on birds interwoven with tricky problems of photography which he solved. The author has that rare gift of "understanding" wild animals and birds, which with

his superb photographic technique, lots of hard work and patience, has produced the most excellent photos in this book. Outstanding are the "high-speed" photos of birds in flight—hawks, owls, kingfisher diving for minnows, and many others, all the most difficult kind to take. It is rare indeed to find such a fine naturalist, expert photographer, and delightful writer all in one book.—F. W. Kent.

Waterfowl Tomorrow—edited by Joseph P. Linduska—United States Dept. of the Interior, Washington—784 p. 194 photographs—1964—\$4.00.

This book tells the story of waterfowl in North America. It was written by 103 experts, including Iowans Paul Errington, Ira Gabrielson, and John Madson. It tells of the changing conditions affecting waterfowl populations, with the species and their movements briefly outlined. Principal breeding areas are reviewed. The flyway concept used in management is explained. The effect of both man and nature on populations is covered. Habitat is mentioned from federal refugees down to local lakes and marshes. Almost every conceivable factor which bears upon the waterfowl and their life cycle is covered in reasonable detail. The closing chapters attempt to explore the future of waterfowl.

This book answers the questions many bird watchers often ask about hunting seasons and other regulations. All hunters who are sincerely interested in the future of hunting should read this book. It should be available in community and school libraries to give every interested person a chance to learn its message. ed.

Life Histories of North American Birds, Petrels and Pelicans; Woodpeckers; Cuckoos, Goatsuckers, Hummingbirds, (2 Vols); Flycatchers, Larks, Swallows; Jays, Crows and Titmice, (2 Vols); and Wood Warblers (2 Vols)—Arthur Cleveland Bent—reprinted by Dover Publications, Inc., New York—1963 and 1964—paperbound—single volumes \$2.75, two volume sets \$2.50 each.

A continuation of the excellent series of reprints of the classic life history works of Bent. Earlier reprints have previously been reviewed, and these volumes are in keeping with the same high standards. They are exact reprints without revision. The original works date to the period 1939-1953 except for the Petrels and Pelicans, first printed in 1922. This volume has been slightly altered in that the photographs are grouped at the end instead of scattered throughout the text, a change made in later Bent volumes.

These volumes cannot be too highly recommended for their excellent text material. One fault with some of the books listed above lies in the splitting of three into two volumes. This is a departure from the original editions and increases the cost almost 100%. Several of the resulting books are quite thin, but still priced at \$2.50. This price is still below the current dealers price for the long out-of-print originals. ed.

The Birds of Arizona—Allan Phillips, Joe Marshall and Gale Monson—University of Arizona Press, Tucson—212 p., twelve color paintings by George M. Sutton and 51 color photographs by Eliot Porter—1964—\$15.00.

This large volume adds to the growing list of beautifully produced works on the avifauna of the various states. It should take its place well up on that list. The approach is to convey only the information of each species as it pertains to Arizona. An introductory section discusses the habitats and changes which have occurred. Photographs illustrate some of the distinctive habitats. The pattern of the species accounts, many of which are quite brief, is to tell exactly where and when the species can be found. In the case of species of more limited occurrence which are peculiar to the state much original data is included. The color paintings and photographs are almost entirely of birds generally associated with Arizona. They are well executed and reproduced. Distributional maps are included for many species.

As a state bird book this certainly fills the bill. It is a handsome addition to any library, and a book one who planned to spend any time at all in the state would want to possess. The price is high, but the color reproductions are very fine and the text is very adequate. ed.

Thoreau on Birds—commentary and compilation by Helen Cruickshank—McGraw-Hill Book Co., New York—331 p.—1964—\$7.95.

A very well done accumulation of passages from Thoreau's works pertaining to birds. The major portion consists of passages on specific species presented in checklist order. This provides a much more useful reference for the ornithologist than the original writings of Thoreau. Mrs. Cruickshank has added comments throughout the book which explain the material, provide present-day terminology, tell the reader the fate of the area or bird and help fill in the background lost in excerpting paragraphs from their original context. These statements are always set off and clearly not Thoreau's writing. One section describes the ornithological reference books used by Thoreau, including many illustrations. Some general bird notes, chronologically arranged, provide much ornithological material dealing with bird life in a very broad way. Thoreau's travels are mentioned, and Iowa readers will especially enjoy the notes from his trip to Minnesota, taken in 1861, just before his death. For those not well acquainted with checklist order an alphabetical list of birds including many obsolete names is included.

This book is beautifully bound and provides the bird watcher with a handy reference to the notes of this great naturalist concerned with birds. Some of the beauty of the original notes and essays is lost by pulling paragraphs from their surroundings, but a book of this nature would be impossible without this approach. Serious students of birds without interest in the past and a love of fine writing will enjoy this book. ed.

Song and Garden Birds of North America—Alexander Wetmore—National Geographic Society, Washington—400 p., 555 illustrations, 509 in color, with six recordings of 70 species—1964—\$11.95.

This beautiful book is an excellent one for the suburban home owner who wants to know something about the birds he sees on his property. As the title implies it does not cover all species, but is confined to the higher forms, passerines plus woodpeckers, kingfishers and hummingbirds. These are discussed in checklist order and are illustrated in color. The text gives a little background of general facts about the species such as economic importance, historical significance, habits, characteristics and range. Size is indicated by the photograph captions. The material is presented in a much more "literary" approach than one would find in a field guide. This, then, would not be the first reference one would use for identification, but a secondary reference for additional data and perhaps verification.

The introductory material gives in capsule form the basic background material on birds. Such subjects as anatomy, flight, and nesting to mention a few are included. Suggestions for bird boxes, feeders, baths and plantings are discussed. Individual chapters on the various families were written by thirteen noted ornithologists lending great variety to the style of the book. The closing chapter by Roger Peterson gives suggestions for field work including the eight important questions he feels are keys to correct identification.

Any bird watcher, novice to expert, would enjoy this volume. It is reasonably priced for the amount of material; text, illustrations, and recordings, which are included. Any ornithological library would be richer with its inclusion. ed.

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